Environmental Impact Assessment

Expansion of Ash Lagoon
Boundary Dam Power Station, Estevan, Saskatchewan
Saskatchewan Power Corporation

Technical Review Comments

on the

Environmental Impact Statement

The Technical Review Comments and SaskPower's environmental impact statement are being made available for public review from 28th June to 28th July, 2006.

Public comment on the Technical Review Comments and the environmental impact statement is invited. To ensure consideration, written comments on the documents must be submitted to Malcolm Ross at the address below by 28th July, 2006.

Malcolm K. Ross
Environmental Assessment Branch
Saskatchewan Environment
3211 Albert Street, REGINA, SK. S4S 5W6
Phone: (306) 787-6190
Fax: (306) 787-0930
Email: mross@serm.gov.sk.ca

Saskatchewan Environment

June, 2006

1. INTRODUCTION

Environmental impact assessments are conducted to provide the information necessary for the Saskatchewan government to determine whether, from an environmental perspective, proposed developments, or changes to existing, approved developments, should be allowed to proceed and, if so, under what conditions. The Environmental Assessment Act requires proponents to prepare environmental impact statements that document the proponents' conclusions on potential environmental effects of the proposed developments, or changes to approved developments, and describe the measures the proponents propose to implement to mitigate any negative environmental impacts and enhance positive impacts.

The Environmental Assessment Act also requires that, prior to the Minister of Environment making his decision whether to approve a proposed development, a technical review (Technical Review Comments) of the environment impact statement must be prepared and that the technical review and the environmental impact statement be made available for public review.

2. PROPOSED EXPANSION OF BOUNDARY DAM ASH LAGOON

Background

In April 2004 Saskatchewan Power Corporation (SaskPower) submitted a proposal to Saskatchewan Environment (SE) to expand the existing ash disposal system at its Boundary Dam Power Station, near Estevan, Saskatchewan. The 20-year plan includes construction of a new ash lagoon and supporting works. These changes have been proposed as a result of recent changes in the ash collection system that have improved the efficiency of capture of fly ash and in anticipation of future ash disposal requirements.

The Boundary Dam Power Station is a coal-fired thermal electrical generation station that began operations in 1958. Coal is burned in boilers to produce high pressure steam to drive the turbines and generate electricity. Ash produced by burning coal is collected from the boiler (bottom ash) and from the power station stacks that exhaust combustion gases to the atmosphere (fly ash). Since 1968 ash disposal has been achieved by the transport of slurried ash by pipeline from the power station to ash lagoons for deposition. Currently the ash is collected by a closed-circuit water handling system and transported by pipeline from the power station to an ash lagoon where the ash settles out. Decant water from the ash lagoon is re-circulated back to the power station.

All activities at the existing ash lagoon site with potential to impact the environment are regulated by provincial agencies. Environmental management at Boundary Dam is subject to regulatory approvals, permits and licences issued by Saskatchewan Environment (SE) under The Environmental Management and Protection Act (2002) and regulations (The Water Regulations, Municipal Refuse Management Regulations, Hazardous Substances and Waste Dangerous Goods Regulations) and The Clean Air Act and regulations.

Proposed Expansion of the Existing Ash Disposal System

SaskPower's proposal to expand the existing ash disposal system at the boundary Dam Power Station involves the construction of a new ash lagoon and supporting works. SaskPower has stated that the existing footprint of the current ash lagoon is not sufficient to contain the volume of ash produced by the continued operation of the power station. This is a consequence of recent changes in the ash collection system that have improved the efficiency of capture of fly ash and the future ash disposal requirements anticipated for an additional 20 years of operational life of the power station.

The proposal identified that the preferred alternative for expansion of the ash disposal system is expansion at the northern end of the existing ash lagoon cells that are constructed entirely within mine spoil.

As proposed a perimeter dyke would be constructed north of the existing ash lagoon system to enclose the new ash lagoon cell. The new ash lagoon cell, designated A6, would be operated in sequence with the existing ash lagoon cells A4/5 and A3 throughout the year. Decant water from the A6 cell would drain from the southwest corner of A6 into the primary settling pond located at the west end of Cell A4/5 and ultimately into the polishing pond. Other components of the ash lagoon system, Cell A2 and the settling ponds are used to receive decant water and small amounts of fine ash. Cell A2 also is used as a direct discharge point for ash only in emergency situations or for short durations. Decant water from all the lagoon cells is directed to the polishing pond and taken back to the ash plant for re-circulation.

A long term operating and progressive decommissioning plan has been developed for the continuous operation of the ash lagoon cells. Under the staged plan ash deposition would be cycled from one cell to another depending on which power station units are operating and on which portion of a cell is filled to capacity for the corresponding stage of the plan. While no definite decommissioning date has been provided for the ash lagoon system under this plan the ash lagoon system could accommodate ash deposition until 2030.

3. ENVIRONMENTAL ASSESSMENT AND APPROVAL PROCESS

Requirement for an Environmental Impact Assessment under The Environmental Assessment Act

Following a technical review by government officials of SaskPower's April 2004 project proposal to expand the ash lagoon, SaskPower was informed that the project was considered to be a "development" as defined by section 2(d) of The Environmental Assessment Act. As a consequence SaskPower was required, pursuant to section 9 of The Environmental Assessment Act, to conduct an environmental impact assessment of the proposed expansion and prepare and submit an environmental impact statement to the Minister of Environment for a decision under section 15 of The Environmental Assessment Act.

Project-Specific Guidelines for the Environmental Impact Assessment

SE provided SaskPower with project-specific guidelines (February 2005) to assist SaskPower with the conduct of the environmental impact assessment and the preparation of the environmental impact statement. The guidelines reflected concerns and issues that were raised by government officials regarding the proposed ash lagoon expansion and identified the information that should be included in the environmental impact statement. The guidelines requested a comprehensive description of the proposed ash lagoon expansion and its operation. The project-specific guidelines requested that the environmental impact statement document the potential impacts of the ash lagoon expansion on land resources and ground and surface waters and discuss their significance. The guidelines also requested that the environmental impact statement evaluate whether these impacts would result in a significant change to existing contaminant loadings dispersed in surface and ground water systems as a result of historic and current regulated operations of the ash lagoon site.

The project-specific guidelines, in draft form, were made available for public review, 2 October to 7 November, 2004.

Environmental Impact Assessment

SaskPower conducted an environmental impact assessment of the proposed expansion and submitted an environmental impact statement titled "*Boundary Dam Power Station, Ash Lagoon Expansion, Environmental Impact Assessment, SaskPower, February 2006*" for an approval decision by the Minister of Environment under section 15 of The Environmental Assessment Act.

These Technical Review Comments were prepared following a technical review by government officials of SaskPower's environmental impact statement. The Comments have been prepared to assist the public and the government decision-makers to review the environmental impact statement and to evaluate the environmental acceptability of the proposed ash lagoon expansion.

Section 11 of The Environmental Assessment Act requires that, prior to a Ministerial decision, the environmental impact statement, and a review of the statement (Technical Review Comments), be made available for public review.

Technical Review of Environmental Impact Statement

The function of an environmental impact assessment is to identify potential impacts of a proposed project, to assess the significance of the potential adverse impacts, and to determine whether the potential adverse impacts could be avoided or minimized by mitigation measures so that any residual adverse impacts would not pose a significant risk to the environment in the long term.

SaskPower's February 2006 environmental impact statement containing the environmental impact assessment of the proposed ash lagoon expansion was subject to a technical review by representatives of North Dakota and Saskatchewan governments' departments and agencies and

federal agencies. This review was conducted to assess whether the environmental impact statement contained the required elements of an environmental impact assessment and addressed the information requested in the project-specific guidelines. This review also determined whether the environmental impact statement was considered technically acceptable to be made available for public review and comment.

It should be noted that the level of technical detail considered acceptable for an environmental impact statement depends on whether potential adverse impacts would pose new or significant risks to the environment, or whether the potential adverse impacts could be managed effectively under the existing environmental regulatory structure, particularly The Environmental Management and Protection Act (2002) and regulations. In the event that a proposed development receives environmental assessment approval, proponents are required to submit more detailed technical information as parts of the applications for the necessary permits, licences and approvals, issued pursuant to regulations under The Environmental Management and Protection Act and other legislation, for construction and operation.

These Technical Review Comments are an evaluation of SaskPower's conclusions regarding the predicted environmental impacts, the significance of the predicted impacts, and the effectiveness of identified mitigative measures. In preparing the Technical Review Comments, SE focused on those factors that are considered to be of primary significance with respect to the proposed ash lagoon expansion and to the environment.

The technical review concluded that the environmental impact statement for SaskPower's proposed ash lagoon expansion was acceptable technically and could be made available for public review.

Officials concluded that, in the event that the ash lagoon expansion received ministerial approval, any informational or technical deficiencies in the environmental impact statement identified during the technical review either could be provided during the regulatory phase preceding construction and operation or be addressed as a condition of that ministerial approval. SaskPower would not be able to commence construction and operation of the ash lagoon expansion until SaskPower applies for and receives all the necessary permits, licences and approvals issued pursuant to regulations under The Environmental Management and Protection Act and other legislation.

Public Review of Environmental Impact Statement
(sections 11 and 12 of The Environmental Assessment Act)

Pursuant to section 12 of The Environmental Assessment Act, the environmental impact statement and the Technical Review Comments are being made available for public inspection for a period of not less than thirty (30) days, 28th June to 28th July, 2006. During the public review period, members of the public may make written submissions to the Minister of Environment regarding the environmental impact statement and the review.

Ministerial Decision

Following the public review of the environmental impact statement, submissions from the public, together with information generated during the technical review of the environmental impact statement, are submitted to the Minister of Environment for a decision as required by The Environmental Assessment Act. The Minister, under section 15 of The Environmental Assessment Act, may give ministerial approval to the proposed expansion of the tailings impoundment system, may grant approval with any terms and conditions that the Minister considers necessary or advisable, or may refuse to approve the proposed development.

At any time during the environmental assessment review process, before a decision on approval is made, the Minister may require public information meetings to be held or may convene a public inquiry.

Intergovernmental Harmonization of Environmental Impact Assessment

Intergovernmental harmonization of environmental impact assessment ensures that the information in the environmental impact assessment documentation is sufficient to address the environmental and regulatory concerns of all governments with an interest in a project.

In accordance with the *Canada-Saskatchewan Agreement on Environmental Assessment Cooperation, June 19, 2005*, Canadian and Saskatchewan environmental assessment processes are coordinated. Environmental impact assessment documents prepared by SaskPower also were provided to the Government of North Dakota.

The North Dakota Department of Health reviewed the environmental impact statement and expressed the opinion that the environmental impacts from the proposed construction would be minor and could be controlled by proper construction methods. Environment Canada retained the environmental impact statement for the use of its Boundary Waters Unit staff and did not provide any comments on the document under an environmental assessment exercise.

4. ENVIRONMENTAL IMPACT ASSESSMENT OF THE PROPOSED EXPANSION OF THE BOUNDARY DAM POWER STATION ASH LAGOON

PHYSICAL CONSIDERATIONS

The focus of the environmental impact assessment of SaskPower's proposal to expand the ash lagoon system, as identified by the project-specific guidelines, was the potential project-related impacts on land resources and ground and surface waters.

The key component of the assessment was the potential for decant water from the ash lagoon to infiltrate into the ground water flow systems underneath the ash lagoon and migrate via ground water flow paths to surface water bodies, particularly Boundary Dam Reservoir, Long Creek and the Souris River. The guidelines requested that the environmental impact assessment evaluate whether these impacts of the ash lagoon expansion would add to the existing contaminant loadings dispersed in surface and ground waters and result in a significant change to the current

levels of ground and surface water quality impacts resulting from regulated operating conditions at the as lagoon site. The guidelines emphasized the need for rigor in the development of ground water modeling because of its significance in the assessment of ground water and potential impacts and on the development of monitoring programs.

The environmental impact statement discussed three alternatives for the ash lagoon expansion and various potential mitigation measures and identified a preferred alternative. The selection of the preferred alternative, expansion to the north of the existing ash lagoon system, was justified because: (i) the influence of the north spoil ponds on ash lagoon infiltration would be effectively removed, (ii) peak ground water discharges were estimated to be significantly less than for the other alternatives, (iii) ground water travel distances to the primary discharge points would not be reduced, and (iv) the north spoil ponds, an area of low level contamination, would be brought under the care and control of the ash management system.

The environmental impact statement provided a description of the geology, geomorphology, hydrology and hydrogeology of the area potentially impacted by the ash lagoon expansion. The impact statement also described the influences that have affected these natural systems including mine spoil and spoil ponds, the Boundary Dam Reservoir, the Rafferty Diversion Channel and the existing ash lagoons. The impact statement contained background water quality information collected from ground water monitoring systems and assessed the impact of historic ash lagoon operations. The environmental impact statement concluded that the mine spoil materials on which the ash lagoons are constructed are providing significant ground water environmental protection. The mine spoil sediments contain clay, aluminium and iron oxides and calcium carbonate that attenuate the flow of potential contaminant trace elements in the ash lagoon water and limit the movement of these elements away from the ash lagoon footprint.

The impact statement contained a three-dimensional hydrogeologic flow model (MODFLOW) that was used to characterize the regional hydrogeology. The model simulated the local ground water flow systems and was used to evaluate technically the ash lagoon expansion alternatives and ground water impacts of the expansion. The model identified that most of the groundwater flow component originating from the ash lagoon system is partitioned into flows that migrate southerly through mine spoil to the Rafferty Diversion Channel and into Boundary Dam Reservoir and easterly through natural geologic formations into Long Creek valley, predominately north of the Boundary Dam. Lesser flows migrate in a northerly direction or vertically down to the deep Boundary Zone flow system.

The potential impacts to surface water quality in the Boundary Reservoir and Long Creek through the ground water system were assessed. While the major component of the ground water discharge flow would report to Boundary Dam and Long Creek the potential mineral loadings from this discharge would represent approximately 4% of the dissolved mineral loadings in the background Long Creek runoff reporting the Boundary Dam Reservoir. It is predicted that after the decommissioning of the ash lagoon system a much slower ground water flow system would develop resulting in extremely low relative values of mineral loadings from the ash lagoon system reporting to Boundary Dam.

As noted, Saskatchewan Environment, under the Environmental Management and Protection Act, currently regulates the operations of the Boundary Dam ash lagoon system. The focus of the regulatory approval is monitoring of the contaminant plume in the ground water relative to ground water quality criteria.

BIOLOGICAL CONSIDERATIONS

The proposed lagoon expansion area lies within parts of NE and NW Quarters of Section 5 of Township 2 Range 8 west of the 2nd meridian and parts of SE and SW Quarters of Section 8 of Township 2 Range 8 west of the 2nd meridian. The land area is marked as Freehold or Crown. There are no privately held coal leases in the area.

The perimeter dyke enclosing the new ash lagoon cell would be constructed north of the existing ash lagoon system to enclose an area approximately 1,400 m. long (east-west axis) and from 550 m. (east end) to 300 m. (west end) wide. Currently this area is comprised of spoil piles and ponds resulting from prior coal mining activity with a portion of land undisturbed by mining at the eastern end. Three major spoil ponds would be enclosed within the outer containment dyke.

Rare and endangered species surveys for plants and animals were conducted. The study area for the surveys included land outside of the proposed ash lagoon area and concentrated on areas that had not been disturbed by previous mining activities.

Three plant species ranked as rare in Saskatchewan were identified at sites within the study area: Whorled milkweed, Pepperwort and Narrow-leafed cattail. While direct impacts to the majority of these sites would occur some sites are located in native vegetation outside of the proposed ash lagoon expansion area. The environmental impact statement noted that these species, while ranked rare in Saskatchewan, are ranked as common elsewhere. The impact statement also identified mitigation strategies, including transplanting, seed collection, and salvaging topsoil, that would minimize or avoid the potential impacts on these plant species.

Three wildlife species ranked as rare were identified within the study area: Sprague's Pipit, northern leopard frog and a smooth green snake. The Sprague's Pipit and the smooth green snake were identified outside of the proposed ash lagoon expansion area. No Sprague' Pipit nest sites were located. The impact statement identified mitigation strategies to avoid or minimize potential impacts to these species, including setback distances from any Sprague's Pipit nest sites during nesting season for construction activities and progressive construction on spoil ponds to allow for northern leopard relocation.

Two of the spoil ponds located within the area of the proposed ash lagoon expansion contain populations of walleye and fathead minnow. These ponds once were stocked by Saskatchewan Environment and used by sport fisherman. These fish populations would be lost as a result of the ash lagoon expansion. While these spoil ponds are no longer considered as fisheries by Saskatchewan Environment the environmental impact statement includes a recommendation that a fish salvage program be conducted prior to construction to retrieve as many of the walleye as possible.

Both animal and plant species would be impacted by loss of habitat when areas of undisturbed native communities are utilized for the ash lagoon expansion. The environmental impact statement included recommendations to mitigate the unavoidable loss of habitat including a contouring and re-vegetation program and to reclaim previously disturbed areas with native grass species and create new habitat.

The Heritage Resources Branch, Saskatchewan Culture, Youth and Recreation, commented that the area proposed for the ash lagoon expansion has been impacted previously by coal mining and related activities and does not contain potential for intact heritage sites. Consequently there was no requirement for a heritage resource impact assessment.

OCCUPATIONAL HEALTH AND SAFETY

Saskatchewan Labour indicated that the provisions of the Occupational Health and Safety Act, 1993 and The Occupational Health and Safety Regulations, 1996 would apply to the project.

Saskatchewan Labour identified various requirements of The Occupational Health and Safety Regulations, 1996 including:

- that an employer, contractor or owner give notice to the Occupational Health and Safety Division prior to digging an excavation that is more than 5 metres deep (section 7);
- that powered mobile equipment be fitted with a roll-over protective structure (section 161);
- that restraining devices for equipment operators and additional equipment must be part of the mobile equipment (section 157);
- that a traffic plan is required for more than one piece of powered mobile equipment (section 133); and
- that pipeline construction is in compliance with any pertinent parts of sections 260 to 265.

Saskatchewan Labour also commented that, while for much of the project, slurry, mud etc. would be wetted or kept wet, if any airborne dust is released during construction SaskPower would be required to ensure that workers would be provided with respiratory protection (minimum of N95 disposable masks) or that the mobile powered equipment would be equipped to prevent dust entry into the operator cabin.

PUBLIC INVOLVEMENT AND SOCIO-ECONOMIC CONSIDERATIONS

Project-related information was distributed to the public by a public consultation process conducted between September 2005 and January 2006. To provide stakeholders with opportunities to express their views and opinions SaskPower contacted and met with the City of Estevan, Rural Municipalities, landowners in the vicinity of the Boundary Dam Power Station and the general public. In October 2005 a public open house that was advertised in the local media was held in Estevan. The environmental impact statement describes the information distributed to the public, identifies the issues raised and provides responses to these issues. The public consultation process did not identify any significant environmental impacts or concerns.

In the environmental impact statement SaskPower commits to ongoing public consultation during throughout the approval and construction phases of the project.

The Sun Country Health Region reviewed the environmental impact statement and found no health issues that related to surface or ground water that would have an impact on human health. The Health Region noted that issues with regard to air-shed management have been and continue to be addressed as depicted in the environmental impact statement. The Region commented that strategies have been identified in the impact statement to maintain present protocols with respect to monitoring environmental issues that have been known to impact human health. The Region also commented that the water modeling, as presented in the impact statement, coupled with plans for continuous evaluation of the project, would provide ongoing assurance that there would be minimal risk to human health.

The Rural Municipality of Estevan No. 5 has an approved Development Plan and Zoning Bylaw. The Development Plan allows for solid and liquid management facilities. Waste disposal development also is permitted in the Agricultural District (A) of the zoning bylaw. The proposed ash lagoon area is zoned A(h) Agricultural District Holding. Under Section 94 of The Planning and Development Act, 1993 the holding provision designation allows the RM council to designate future land use. Development applicants obtaining a development permit in the Agricultural District must apply to council to have the holding provision removed.

As noted the proposed expansion of the ash lagoon would facilitate the continued operation of the Boundary Dam Power Station and continue the positive economic, employment and business opportunities related to the Estevan region. The environmental impact statement indicates that construction of the new ash lagoon cell would create work for about 10 equipment operators for 4 to 5 weeks and 8 pipeline workers for 6 to 8 weeks. Once commissioned the operation of the new cell would be integrated into existing operations of the ash lagoon and would not require additional personnel for operation. Currently 6 to 8 SaskPower employees are involved in ash operations and 2 to 3 employees involved in environmental monitoring of the piezometers and spoil ponds surrounding the ash lagoon system.

Formal opportunity for public participation also was provided by the public review of the draft project-specific guidelines for the environmental impact assessment of the proposed ash lagoon expansion.

Saskatchewan Environment is satisfied that regional residents and organizations were notified about the proposed expansion of the ash lagoon and were provided with the opportunity to be involved with the environmental assessment process.

ENVIRONMENTAL MONITORING

The environmental impact statement states that routine dyke inspection and monitoring procedures are currently in place. Daily inspections are done for leakage from piping, high ash water levels seepage through dykes and any emergency situations. On a weekly basis the perimeter of all dykes and drainage ditches are inspected for similar parameters plus dyke

erosion, excessive ash build-up around discharge pipes and channeling of ash water. Any abnormal or environmental concerns are reported and corrected if necessary.

In 1990 15 piezometers were installed around the existing ash lagoon system to monitor ground water. Since 1990 additional piezometers have been installed in the expansion study area; 18 in 2022 and 3 in 2005. The environmental impact statement describes a recommended optimized piezometer network to incorporate the proposed new ash lagoon into the existing ground water monitoring network.

Should the proposed expansion of the ash lagoon be approved, specific details of the required monitoring programs would be determined during regulatory licensing by consultation between SaskPower and the Industrial, Potash, Coal and Spills Unit of the Environmental Protection Branch, Saskatchewan Environment.

DECOMMISSIONING, RECLAMATION, ABANDONMENT AND INSTITUTIONAL CONTROL

The environmental impact statement describes a progressive decommissioning plan in which the sequentially filled ash lagoon cells would all be filled by approximately 2030, depending on variation as a result of future changes to operations of the Boundary Dam Power Station. Once filled, ash lagoons would be taken out of service, ash lines removed and the cells contoured and reclaimed. Cell A2 would be maintained as an operating and emergency ash cell until final decommissioning. The settling pond also would remain in active use until decommissioning. In the final stages of decommissioning of the ash lagoon, coinciding with the decommissioning of the Boundary Dam Power Station, ash deposition would alternate between Cell A2 and the settling pond. Final decommissioning would involve the removal of all ash lines from former ash disposal areas and the initiation of the final reclamation process.

As each cell is decommissioned the ash surface would be re-contoured and a soil cover placed and contoured over the ash surface. Contouring would be conducted to create positive drainage from the ash surface. Based on previous studies of reclamation coal ash, particularly in alkaline conditions, and that the coal ash is not a reactive, potentially toxic waste, the recommended soil cover would be a simple vegetative soil cover, nominally 1 metre thick. The vegetative cover would reduce infiltration of precipitation and minimize dusting. The vegetative cover would be a self-sustaining mix of forage species or native grasses.

Each of the major ash lagoon cells would be surcharged. Surcharging is a method whereby the storage capacity of a full ash lagoon cell can be substantially increased within the existing lagoon footprint. This involves the construction of internal dykes composed of compacted ash on the top of a full cell to contain slurried ash at elevations above the original perimeter dyke. Reclamation of the slopes of the surcharge dykes would be completed on a regular basis whenever large enough cumulative areas exist to warrant soil placement and hydroseeding procedures. Progressive reclamation of the surcharge slopes would allow early establishment of vegetation to control erosion and dusting from the slopes.

The environmental impact statement states that, after final decommissioning, the site would be under the care and control of SaskPower so that ground and surface water post-decommissioning monitoring could establish any longer term impacts. A decommissioned ash lagoon monitoring program would identify and track the new equilibrium conditions that would develop after decommissioning. The impact statement states that once the predicted low impacts are confirmed, and confidence in the long-term management of the site is established, SaskPower would develop a plan for the transfer of the land to the Province. In the event that significant impacts are identified that require long-term management SaskPower would maintain ownership of the land.

When operations at Saskpower's Boundary Dam Power Station cease, SaskPower would be required to submit final decommissioning plans to Saskatchewan Environment for approval prior to the commencement of any decommissioning or reclamation activities. Detailed requirements for decommissioning, reclamation and post-operational environmental monitoring then would be determined in consultation with the regulatory agencies.

If the ash lagoon expansion is approved the Industrial, Potash, Coal and Spills Unit of the Environmental Protection Branch, Saskatchewan Environment would issue final approvals for the proposed ash lagoon expansion and all related activities including decommissioning and reclamation work and post-decommissioning monitoring. SaskPower would not be released from their responsibilities for these sites until the potential long-term environmental effects have been evaluated and are considered acceptable.

5. REVIEW OF THE ENVIRONMENTAL IMPACT ASESSMENT

The environmental impact statement (EIS) states that the proposal to expand the ash lagoon would enable the safe storage of ash tailings for the expected life of the Boundary Dam Power Station. From a socio-economic perspective, the additional ash storage capacity, would allow the continued operation of the Boundary Dam Power Station that meets a significant portion of Saskatchewan's electricity requirements and provide continued positive economic, employment and business opportunities for Estevan and surrounding region.

The EIS describes the major components of the ash lagoon expansion project, including the design and construction of the containment dyke, the design and construction of a bentonite slurry cut-off wall within the dyke at the eastern end of the new ash lagoon cell, dyke construction across a spoil pond at the western end of the new cell and infilling of this spoil pond for a nominal 100 m. away from the dyke. This information is supported by descriptions of the operational history of the ash lagoon system and of the potentially affected local environment. The environmental impact statement describes the current ash handling system and discussed the integration of the proposed new ash lagoon cell into the current system.

The impact statement also describes the historic development of the ash lagoon and improvements made to the ash management procedures since the commencement of operations at the Boundary Dam Power Station.

The EIS describes the public consultation activities conducted by SaskPower to provide notification to interested parties in the Estevan region regarding the proposed expansion of the ash lagoon. The consultation process provided detailed information about the project, the anticipated project schedule and potential environmental impacts, and was designed to seek stakeholder input and comments regarding the project.

The EIS identifies potential environmental effects and presents an assessment of the predicted effects of construction and operation of the proposed ash lagoon xpansion on physical and biological resources. The EIS concludes that the impacts of the expansion of the ash lagoon would be limited.

The technical review of the environmental impact statement for the proposed expansion of the ash lagoon identified various issues related to potential environmental impacts and environmental management that would have to be addressed prior to the ash lagoon expansion being issued the approvals, permits and licences necessary for construction and operation. These issues relate to the design of the monitoring program and the verification of the model and the predicted impacts. In particular the monitoring design should adequately identify and account for site heterogeneity.

Should the proposed ash lagoon expansion project proceed, all aspects of the construction and operation of the project would be incorporated into the existing regulatory approval and licensing framework.

The technical review did not identify any significant environmental or technical issues that would require the public review of the environmental impact statement to be delayed until these issues were resolved.